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Reducing Lawn With Buffer Strips

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Lawn requires a lot of care, especially on the edges by the sidewalk where brown patches and weeds often appear.

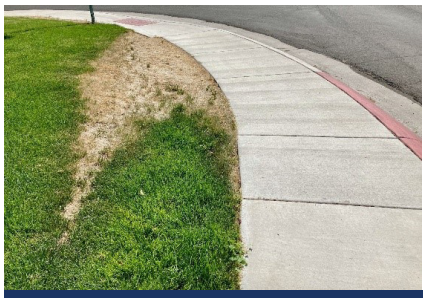
If you'd love to keep your lawn but are tired of those maintenance headaches and looking for an eco-friendly option, try buffer strips!

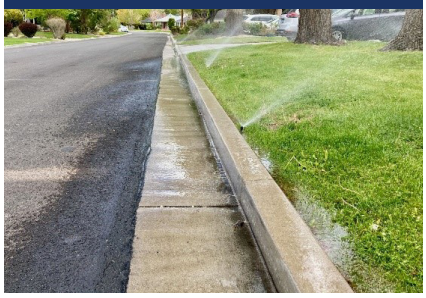
Buffer strips are areas between the lawn and the sidewalk that capture runoff from sprinklers. They can be as simple as a strip of rock mulch or may be planted with low-growing plants.

Interested in a buffer strip? Here's a guide to get you started.

Why consider a buffer strip?

When it comes to lawns, there is a lot to love. They provide great play areas for kids and pets, they cool the area around our homes on hot summer days (Gomez-Navarro, 2021), and they have low flammability, which helps create defensible space in high fire hazard areas (Skelly, updated 2021).





Unsightly dry patches on a lawn edge (top) and irrigation runoff (bottom) are common when lawns are placed next to sidewalks or other paved surfaces. (Photo Credit: Carrie Jensen)

But, lawns can also require a lot of care and maintenance, especially on the edges next to the sidewalk. Who hasn't dealt with dry patches next to the sidewalk, had unsightly burn spots where dogs frequently pee on the lawn edge, had weeds constantly popping up along the lawn edge, or had sprinklers get kicked and damaged?

In addition, when lawn sprinklers are located next to sidewalks or on steep slopes, water is more likely to run off these surfaces, wasting water and increasing your water bills. That irrigation runoff can also carry chemicals, such as fertilizers and pesticides, from your yard into the storm drains, which directly flow to natural waterways (Bale, 2013). Excess fertilizers can cause algae blooms, which deplete the water of oxygen, degrading the conditions for fish and other aquatic species (Camargo, 2005). Algae blooms also produce toxins that make the water unsafe to drink or recreate in. Pesticides commonly used to control ants, spiders and other garden insect pests can also negatively impact macroinvertebrate aquatic species, such as mayflies, and wash off in irrigation runoff (Gan, 2012).

Shown here is an example of a polluted drainage in the Reno/Sparks area with litter and algae growth. (Photo Credit: Carrie Jensen)

So, if you'd love to keep your lawn but are tired of some of these maintenance headaches and looking for an eco-friendlier option that will conserve water and prevent water pollution, we have the perfect solution for you – buffer strips!

What are buffer strips?

Buffer strips are areas between the lawn and the sidewalk (or any other paved surface) that capture runoff from sprinklers. These buffer areas

Here a homeowner has installed a rock mulch border between the lawn and sidewalk. (Photo Credit: Carrie Jensen)

A homeowner has installed a few feet of decomposed granite planted with drought-tolerant daylilies to serve as a buffer between the lawn and sidewalk. (Photo Credit: Carrie Jensen)

can be as simple as a strip of rock mulch, or they can contain plantings of native and drought-tolerant plants. Buffer strips are best to include in new landscapes but are a relatively easy retrofit for existing landscapes. They add curb appeal and visual interest to yards. They are also very cost effective in the long term because they reduce water usage and lawn edge maintenance.

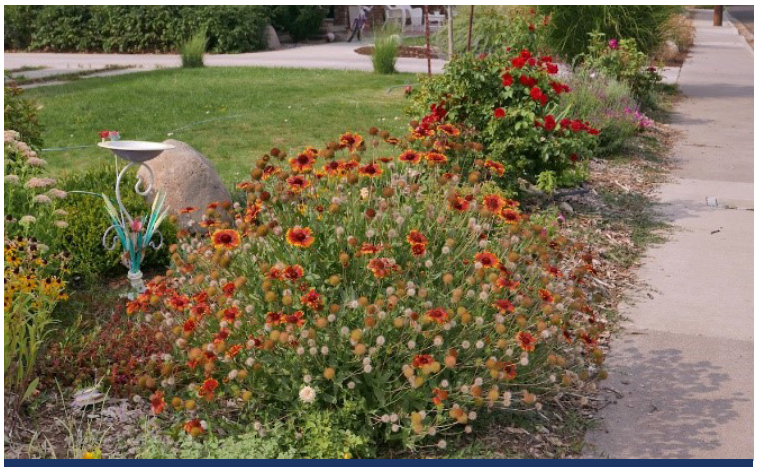
Design considerations

Buffer strip design parameters are simple. They should be at least 3 feet wide, but the wider they are, the more likely they will be to slow irrigation runoff. They can be filled with many different mulches and plants.

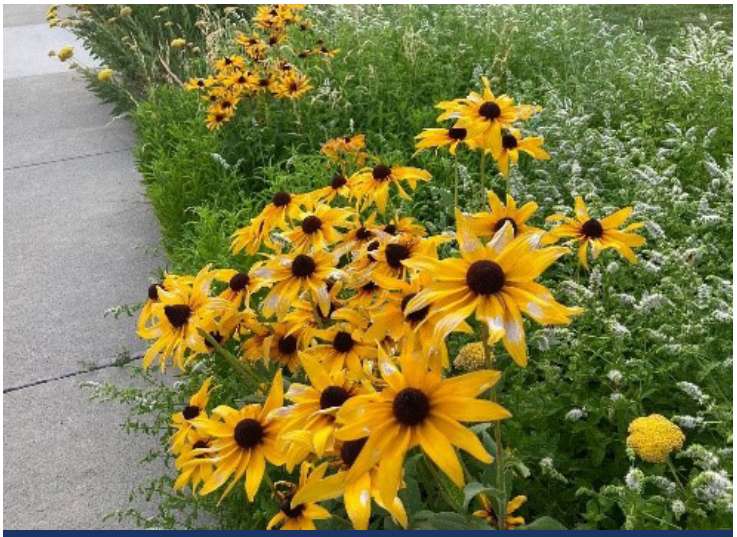
You can consider gravel or larger rock mulches but should avoid decomposed granite on slopes, because it can easily erode and wash onto sidewalks. There are also permeable paving options that can be useful, especially if you're trying to create a buffer between a narrow sidewalk and lawn where people step out of their cars.

If you want to include plants, native and drought-tolerant plants are good choices because they are adapted to our high-desert climate and can survive the harsh conditions next to the sidewalk. They require less water, fertilizers and pesticides. They also have extensive roots to help absorb and filter irrigation runoff. Some good options include sulfur buckwheat (*Eriogonum umbellatum*), yarrow (*Achillea millefolium*), lavender (*Lavandula angustifolia*), silver mound sage (*Artemisia schmidtiana* 'Silver Mound'), blanketflower (*Gaillardia x grandiflora*) and blue grama grass (*Bouteloua gracilis*). No matter which plants you choose, maintain sight lines from driveways and at street corners (check your local codes for plant height limits; they vary between 24 and 30 inches), and make sure the mature width of the plant does not exceed the planting area.

This buffer strip includes drought-tolerant yarrow and lavender planted between the lawn and the sidewalk. (Photo Credit: Carrie Jensen)



Blanketflower and a variety of perennials in this buffer strip provide seasonal interest and pollinator habitat. (Photo Credit: Carrie Jensen)



Black eyed susans are a highlight in this example buffer strip. (Photo Credit: Carrie Jensen)

How to remove lawn and install a buffer strip

If you need to remove some lawn, the fastest method is to use a sod cutter. This tool will cut the lawn out in strips that you can easily remove and either compost or dispose of offsite. This removal method also reduces the likelihood that the turfgrass will grow back and helps ensure that the soil level next to the sidewalk is slightly lower so that dirt and mulch won't slough off onto the sidewalk. If you want the new lawn edge to look neat and tidy, consider installing edging between the new lawn boundary and the buffer strip.

How to water a buffer strip

In addition to removing some existing lawn, you will also need to revise your irrigation system to accommodate the new buffer strip and still water the remaining lawn. The plants in the buffer strip will require far less water than the remaining lawn, and the irrigation should be broken into two hydrozones (i.e. watering zones) that reflect those different water needs of the lawn and the buffer strip. The lawn sprinklers should be moved and adjusted to the new boundary of the lawn area. A drip system should be installed in the buffer strip to meet the low watering requirements for this area, and it should be on a separate valve which will allow you to adjust watering frequency over time. If you have chosen native and drought-tolerant plants, they will need more frequent watering in the first few years to establish their root systems. But, once they are established, they will require less frequent watering.

Since each irrigation system is different, it may be best to work with a landscape professional to determine the most efficient retrofit. You can find local Qualified Water Efficient Landscapers to hire at qwel.net.

Maintenance considerations

Once you install a buffer strip, it is very low maintenance; however, there are a few things to consider. Make sure mulch doesn't slough off onto the sidewalk, especially if the buffer strip is on a slope. If you lowered the soil level during turf removal, this shouldn't be a big problem. Since we need to maintain sightlines and clear access to sidewalks, make sure to prune plants if they grow too tall (usually over 2.5 feet, but check local codes) or hang over onto the sidewalk. Choosing the right plant and giving it the proper area to grow will often minimize this maintenance. As with all planting areas, you'll also need to regularly check your irrigation for leaks and proper function.

Sources and further reading

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